

## ABSTRACT OF THE DISCLOSURE

The phospholipid growth factor lysophosphatidic acids  
5 (LPAs) containing unsaturated fatty acids (18:1, 18:2 and 20:4) and  
fatty alcohols containing hydrocarbon chains with more than 4  
carbons were capable of inducing a rapid formation of neointima,  
an initial step in the development of atherosclerotic plaque. LPAs  
with saturated fatty acids did not induce neointima formation. A  
10 Peroxisome Proliferator-Activated Receptors gamma (PPAR $\gamma$ )-specific  
agonist Rosiglitazone also induced a profound formation of  
neointima. GW9662, a selective and irreversible antagonist of PPAR $\gamma$ ,  
abolished LPA- and Rosiglitazone-induced neointima formation,  
indicating that LPA-induced neointima formation requires the  
15 activation of PPAR $\gamma$ . These data suggest that LPA analogs that bind to  
but do not activate downstream signaling of PPAR $\gamma$  or antagonists of  
PPAR $\gamma$  that inhibit PPAR $\gamma$  signaling would be useful in the prevention  
and/or treatment of neointima formation and atherosclerosis.